

BEFORE THE BOARD OF ENVIRONMENTAL REVIEW
OF THE STATE OF MONTANA

In the matter of the amendment of ARM)	NOTICE OF PUBLIC HEARING ON
17.8.740 and 17.8.767 pertaining to)	PROPOSED AMENDMENT AND
definitions and incorporation by)	ADOPTION
reference, and the adoption of New)	
Rules I and II pertaining to mercury)	(AIR QUALITY)
emission standards and mercury)	
emission credit allocations)	

TO: All Concerned Persons

1. On May 31, 2006, at 9:00 a.m., at the Great Falls Civic Center - Commission Chambers, 2 Park Drive South, Great Falls, Montana and on June 1, 2006, at 8:00 a.m. at MSU Billings - Student Union Building, 1st Floor - Ballroom, 1500 University Drive, Billings, Montana, the Board of Environmental Review will hold public hearings to consider the proposed amendment and adoption of the above-stated rules.

2. The board will make reasonable accommodations for persons with disabilities who wish to participate in these public hearings or need an alternative accessible format of this notice. If you require an accommodation, contact the board no later than 5:00 p.m., May 22, 2006, to advise us of the nature of the accommodation that you need. Please contact the board secretary at P.O. Box 200901, Helena, Montana 59620-0901; phone (406) 444-2544; fax (406) 444-4386; or e-mail ber@mt.gov.

3. The rules proposed to be amended provide as follows, stricken matter interlined, new matter underlined:

17.8.740 DEFINITIONS For the purposes of this subchapter:

(1) "Alternative mercury emission limit" means a mercury emission limit for a mercury-emitting generating unit, established by the department in a permit issued or modified pursuant to 75-2-211, MCA, in lieu of compliance with [NEW RULE I(1)(a)].

(1) remains the same, but is renumbered (2).

(3) "Commercial operation" means the time when the owner or operator supplies electricity for sale.

(2) through (7) remain the same, but are renumbered (4) through (9).

(10) "Mercury" means mercury or mercury compounds in either a gaseous or particulate form.

(11) "Mercury-emitting generating unit" means any emitting unit at a facility for which an air quality permit is required pursuant to 75-2-211 or 75-2-217, MCA, that generates electricity and combusts coal, coal refuse, or a synthetic gas derived from coal in an amount greater than 10% of its total heat input, calculated on a rolling 12-month time period, and that is subject to 40 CFR 60, subpart HHHH.

(8) through (15)(b) remain the same, but are renumbered (12) through (19)(b).

AUTH: 75-2-111, 75-2-204, MCA

IMP: 75-2-211, MCA

17.8.767 INCORPORATION BY REFERENCE (1) For the purposes of this subchapter, the board hereby adopts and incorporates by reference:

(a) through (c) remain the same.

(d) 40 CFR Part 60, specifying standards of performance for new stationary sources, except for 40 CFR 60.4101-4176, subpart HHHH, Emission Guidelines and Compliance Times for Coal-fired Electric Steam Generating Units;

(e) 40 CFR 60.4101-4176, subpart HHHH, Emission Guidelines and Compliance Times for Coal-fired Electric Steam Generating Units, except for 40 CFR 60.4141-4142, until December 31, 2014. The adoption and incorporation by reference of 40 CFR Part 60, subpart HHHH, is not effective after December 31, 2014.

(e) through (g) remain the same, but are renumbered (f) through (h).

(2) through (4) remain the same.

AUTH: 75-2-111, 75-2-204, MCA

IMP: 75-2-211, 75-2-215, MCA

4. The proposed new rules provide as follows:

RULE I MERCURY EMISSION STANDARDS FOR MERCURY-EMITTING GENERATING UNITS (1) Except as provided in (3) through (7), the owner or operator of a mercury-emitting generating unit shall:

(a) beginning January 1, 2010, or when commercial operation has begun, whichever is later, limit mercury emissions from the mercury-emitting generating unit to an emission rate equal to or less than 0.9 pounds of mercury per trillion Btu, calculated as a rolling 12-month average;

(b) for a facility for which the department has issued a Montana air quality permit, submit an application to the department for a modification of the Montana air quality permit for the facility pursuant to 75-2-211 or 75-2-217, MCA, to establish the mercury emission limit from (1)(a) as a condition of the permit and provide an analysis with respect to the facility's mercury control plan by January 1, 2009, or 12 months prior to beginning commercial operation, whichever is later;

(c) by January 1, 2010, or when commercial operation has begun, whichever is later, operate equipment that is projected, as determined by the department, to meet the standard in (1)(a).

(2) If the owner or operator of a mercury-emitting generating unit properly installs and operates control technology or boiler technology, or follows practices projected to meet the mercury standard in (1)(a), and the control technology, boiler technology, or practices fail to meet the emission rate required in (1)(a), the owner or operator:

(a) shall notify the department of the failure by April 1, 2011, or within 15

months after commercial operation has begun, whichever is later; and

(b) may file an application with the department for a permit or permit modification pursuant to 75-2-211, MCA, to establish an alternative mercury emission limit. The application must be filed by July 1, 2011, or within 18 months after commercial operation has begun, whichever is later, and must include all monitoring data, obtained pursuant to (9), for the mercury-emitting generating unit.

(3) The department may establish an alternative mercury emission limit only if the owner or operator applies for, or has applied for, a permit under 75-2-211, MCA, that requires boiler technology, mercury-specific control technology, or practices that the department determines constitute a continual program of mercury control progression able to achieve the mercury emission rate requirement of (1)(a). The department may not establish an alternative mercury emission limit that would cause an exceedance, after December 31, 2014, of the state of Montana's electrical generating unit mercury budget established by EPA.

(4) An alternative mercury emission limit established in a permit issued pursuant to 75-2-211, MCA, expires four years after the date of the department's decision establishing the alternative mercury emission limit.

(5) The owner or operator of a mercury-emitting generating unit, for which the department has established an alternative mercury emission limit, may file an application with the department for a modification of the air quality permit for the facility, pursuant to 75-2-211, MCA, to establish a new alternative mercury emission limit. The application must be filed with the department at least three months prior to expiration of the alternative mercury emission limit. If such an application is filed, the failure of the owner or operator of the mercury-emitting generating unit to have a new alternative mercury emission limit for the unit prior to expiration of the existing alternative mercury emission limit is not a violation of this rule until the department takes final action on the permit application, except as otherwise stated in this rule.

(6) For any application for a new alternative mercury emission limit under (5), the department shall review the mercury-emitting generating unit's existing alternative mercury emission limit and program of mercury control, associated data, and available mercury control technologies, and may establish the same, or a more stringent, alternative mercury emission limit, based upon data regarding the demonstrated control capabilities of the type of control technology or boiler technology installed and operated at the mercury-emitting generating unit, if the data supports the new alternative mercury emission limit. The department may not establish a less stringent alternative mercury emission limit pursuant to this section.

(7) If an owner or operator has timely notified the department of failure to comply with (1)(a), files a complete application for an alternative mercury emission limit, and operates and maintains the mercury-emitting generating unit, including any associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing mercury emissions, the department may not initiate an enforcement action for violation of (1)(a) between the date when (1)(a) became applicable and the date of the department's decision on the application for an alternative emission limit, if the department establishes an alternative emission limit.

(8) If more than one mercury-emitting generating unit is located at a facility, the owner or operator may demonstrate compliance with the requirements of (1)(a)

or an alternative emission limit on a facility-wide basis. An owner or operator choosing to demonstrate compliance with this rule on a facility-wide basis shall report the information required in (10) on a facility-wide basis.

(9) The owner or operator of a mercury-emitting generating unit shall monitor compliance, pursuant to 40 CFR 60.48(a) through 60.52(a) and 40 CFR 75 subpart I, with the mercury emission standard applicable under this rule or any alternative emission limit. Any continuous emissions monitors used must be operated in compliance with 40 CFR Part 60, Appendix B.

(10) The owner or operator of any mercury-emitting generating unit shall report to the department within 60 days after the end of each calendar quarter, on forms as may be prescribed by the department:

(a) the monthly average mercury emission rate, for each month of the quarter; and

(b) the percentage of time the mercury emission monitoring method was operating during the quarter.

AUTH: 75-2-203, 75-2-204, 75-2-211, MCA

IMP: 75-2-211, MCA

NEW RULE II MERCURY ALLOWANCE ALLOCATIONS UNDER CAP AND TRADE BUDGET (1) The department shall submit to EPA mercury allowance allocations as described below.

(a) For mercury-emitting generating units for which commercial operation commenced before January 1, 2001, the department shall submit allowance allocations by October 31, 2006, for the control period years of 2010, 2011, and 2012, and by October 31, 2009, and October 31 of each year thereafter for the fourth control period year after the year of the notification deadline in a format prescribed by EPA and in accordance with (2) and (3).

(b) For mercury-emitting generating units for which commercial operation commenced after January 1, 2001, the department shall submit allowance allocations by October 31 of the control period year for which the mercury allowances are allocated.

(c) If the department fails to submit to EPA the mercury allowance allocations in accordance with (1), the allocations of mercury allowances for the applicable control period are the same as for the control period that immediately precedes the applicable control period.

(2) The mercury allowance shall be calculated by multiplying the applicable numerical limitation below by the maximum (nameplate) heat input value (in MMBtu/hr) for a specific mercury emitting generating unit and multiplying that value by 8760 hours per year to determine an annual allocation value. The calculation result will be rounded to the next whole allowance as appropriate.

(a) Mercury allowances shall be allocated, pursuant to (1), to the owner or operator of a mercury-emitting generating unit on the following basis:

(i) For the owner or operator of a mercury-emitting generating unit for which commercial operation commenced before January 1, 2001, and that does not combust lignite, the mercury allocation shall be based on an emission rate equal to 2.4 pounds of mercury per trillion Btu. For the owner or operator of a mercury-

emitting generating unit for which commercial operation commenced before January 1, 2001 that combusts lignite, the mercury allocation shall be based on an emission rate equal to 4.7 pounds of mercury per trillion Btu;

(ii) For the owner or operator of a mercury-emitting generating unit for which commercial operation did not commence before January 1, 2001, the mercury allocation shall be based on an emission rate equal to 1.5 pounds of mercury per trillion Btu as allocations are available, on a first-come, first-served basis, not to exceed the Montana mercury budget.

(b) Allocations for a particular control period are limited to those mercury-emitting generating units that were, or are anticipated to be, in commercial operation in the year for which the allocations are being made. Allocations for a partial year, or anticipated partial year, shall be prorated. The owner or operator of a mercury-emitting generating unit that did not operate, or that operated less than projected, must surrender excess allowances.

(c) Allocations may not exceed the Montana mercury budget.

(3) This rule is not effective after December 31, 2014.

AUTH: 75-2-203, 75-2-204, 75-2-211, MCA

IMP: 75-2-211, MCA

REASON: Pursuant to 75-2-203(1), MCA, the board has authority to establish limits on emissions of air pollutants from any air pollutant source necessary to prevent, abate, or control air pollution. Mercury emissions from coal-fired electric utility steam generating units (EGUs), i.e., coal-fired power plants, pose a threat to human health and safety and the environment, and the board is proposing to regulate those emissions in the proposed amendments and new rule.

A substantial amount of information concerning mercury is available on the website of the U.S. Environmental Protection Agency (EPA), <http://www.epa.gov/mercury>, the source of much of the information included below.

Mercury is a naturally occurring element found in air, water, and soil. It exists in several forms: elemental mercury; inorganic mercury compounds; and organic mercury compounds. Mercury is found in many materials, including coal. When coal is burned, mercury is released into the environment. Elemental mercury is the most likely form to travel in the air globally and form part of the global cycle, whereas, particle-bound mercury and oxidized (or ionic) mercury can fall out of the air over a range of distances from the emission source.

EPA estimates that annual global mercury emissions from all sources, natural and human-caused, are in the range of 4,800 – 8,300 tons per year. Human-caused mercury emissions account for approximately three percent of the total global emissions, and the U.S. power sector contributes approximately one percent of the total global emissions.

Coal-burning power plants are the largest human-caused source of mercury emissions to the air in the U.S. Nationally, EGUs cause over 40 percent of all anthropogenic mercury emissions.

EPA estimates that about one-quarter of U.S. mercury emissions from coal-burning power plants is deposited within the contiguous U.S. and the rest enters the global cycle. Similarly, EPA estimates that more than one-half of the mercury

deposited in the U.S. comes from sources outside the U.S. However, deposition varies by geographical location. For example, U.S. sources represent a greater percentage of the total deposition in parts of the Northeast because of the direction of the prevailing winds. EPA has estimated that approximately eight percent of mercury emissions from a particular EGU are deposited locally.

EPA estimates of local deposition potentially are in dispute. An EPA-funded study conducted in 2003-2004 in Steubenville, Ohio, used rain samples and meteorological data to track mercury emissions from smokestacks to monitors. Nearly 70 percent of the mercury in rain collected at an Ohio River Valley monitoring site originated from nearby coal-burning industrial plants. These findings show that "hot spots" (concentrated local deposition of mercury) may be a much bigger concern than previously acknowledged.

Mercury in the air eventually settles into water or onto land where it can be washed into water. Once deposited, microorganisms can convert mercury into methyl mercury, a highly toxic form that accumulates in fish, shellfish, and birds and other animals that consume fish, with concentrations increasing further up the food chain. Many variables influence the levels of methyl mercury concentrations in fish, including water pH and temperature, the amount of dissolved solids and organic material in the water, the types of organisms that inhabit the water, and the presence of chemicals in the water. At high levels of exposure, the effects of methyl mercury on birds and mammals may include reduced reproduction, slower growth and development, abnormal behavior, and death.

Fish and shellfish are the main sources of methyl mercury exposure to humans, with large fish that eat other fish, generally, having the highest concentrations. Mercury exposure at high levels can harm the brain, heart, kidneys, lungs, and immune system of people of all ages. High levels of methyl mercury in the bloodstream of unborn babies and young children may harm the developing nervous system, impairing the ability of a child to think and learn.

EPA has established a blood mercury level reference dose (RfD) of 0.1 micrograms/kilogram of body weight per day as an exposure level without recognized adverse effects. In a 1999-2000 National Health and Nutrition Examination Survey of 16 to 49-year old women, approximately 8 percent of the women in the survey had blood mercury concentrations reflecting levels greater than EPA's RfD. Based on this survey, EPA estimates that more than 300,000 babies born each year in this country may have increased risk of learning disabilities associated with in utero exposure to methyl mercury.

Montana has statewide fish advisories for northern pike, lake trout, and walleye greater than 15 inches, due to mercury contamination, recommending no consumption by sensitive populations, which includes children and pregnant women. The statewide advisory also recommends limited consumption by sensitive populations of bass, burbot, grayling, perch, salmon, sunfish, brook trout, brown trout, cutthroat trout, rainbow trout, walleye less than 15 inches, and whitefish, with the suggested consumption limit varying by fish species, from one meal per week to four meals per week. There also are numerous other advisories around the state warning against eating other types of fish from different water bodies, due to high levels of mercury. These warnings recommend various consumption limits for sensitive populations as well as the general population. These water bodies include

many of the state's popular fisheries, including, among others, Bighorn Lake, Bynum Reservoir, Canyon Ferry Reservoir, Clark Canyon Reservoir, Crystal Lake, Flathead Lake, Fresno Reservoir, Georgetown Lake, Hauser Reservoir, Hebgen Lake, Holter Reservoir, Island Lake, Lake Frances, Lake Koocanusa, Lake Mary Ronan, Martinsdale Reservoir, Nelson Reservoir, Tiber Reservoir, Tongue River Reservoir, and Whitefish Lake.

In the Clean Air Act Amendments of 1990, Congress included mercury in a list of 188 hazardous air pollutants for which EPA was required to develop a list of categories and subcategories of major sources and area sources of those pollutants and promulgate maximum achievable control technology (MACT) emission standards for each category and subcategory. Section 112(b) and (c)(1) and (2), of the federal Clean Air Act (FCAA), 42 U.S.C. § 7412(b) and (c)(1) and (2). Currently, EGUs are the only major industrial source of mercury emissions for which mercury is not regulated as a hazardous air pollutant under the FCAA or Clean Air Act of Montana. For EGUs, Congress required EPA to conduct a study of the hazards to public health reasonably anticipated to occur as a result of EGU emissions of the listed pollutants, after imposition of the requirements of the FCAA. Section 112(n)(1)(A), of the FCAA, 42 U.S.C. § 7412(n)(1)(A). Congress required EPA to regulate EGUs under Section 112 if EPA determined from the study that regulation under that section was appropriate and necessary. Id.

In February 1998, EPA submitted a report to Congress concerning mercury emissions from EGUs, titled Study of Hazardous Air Pollutant Emissions from Electric Utility Steam Generating Plants - Final Report to Congress ("Utility Study"). In 1999, in an Information Collection Request (ICR), EPA required coal-fired EGUs across the country to conduct emission tests to determine the levels of mercury being emitted from those facilities.

On December 20, 2000, based on the Utility Study, the ICR testing, and a National Academy of Sciences report concerning the health effects of methyl mercury, EPA concluded that it was appropriate and necessary to regulate coal and oil-fired electric utility steam generating units under Section 112, and EPA listed those facilities as source categories for which EPA would promulgate MACT standards. 65 Fed. Reg. 79826. This conclusion was based on EPA's findings that coal and oil-fired electric utility steam generating units are the largest domestic human-caused source of mercury emissions and that mercury in the environment presents significant hazards to public health and the environment and the fact that EPA had identified control options that it believed would effectively reduce hazardous air pollutant emissions from those units. Id., at 79830.

On January 30, 2004, EPA published a notice of rulemaking that included two mutually exclusive alternatives for regulating emissions of mercury from coal and oil-fired electric utility steam generating units. 69 Fed. Reg. 4652 (January 30, 2004). The first alternative, based on EPA's conclusion that it was appropriate and necessary to regulate those source categories under Section 112, was a proposed MACT standard. The second alternative, based on the opposite conclusion, that it was not appropriate or necessary to regulate those source categories under Section 112 after imposition of the requirements of the FCAA, was to regulate mercury emissions from those source categories under the New Source Performance Standard (NSPS) program in Section 111 of the FCAA, 42 U.S.C. § 7411, rather

than under the MACT program.

On March 29, 2005, EPA removed coal and oil-fired electric utility steam generating units from the Section 112(c) list. 70 Fed. Reg. 15994 (March 29, 2005). In doing so, EPA stated that it had determined that, in listing those source categories under Section 112, it had placed inappropriate weight on environmental effects unrelated to public health, whereas Section 112(n)(1)(A) required EPA to analyze only hazards to public health, and EPA stated it had not fully considered the reductions that would result from imposition of the other requirements of the FCAA. 70 Fed. Reg. 16,002-16,003.

On May 18, 2005, EPA adopted the Clean Air Mercury Rule (CAMR), instead of the MACT standard alternative. 70 Fed. Reg. 28,606 (May 18, 2005); 40 CFR 60.4101-4176. CAMR consists of: a cap and trade program, with an interim 2010 nationwide cap and a 2018 nationwide cap on total EGU mercury emissions; budgets under the caps for each state; authorization for owners or operators to trade unused emission credits; NSPS emission limits for new EGUs; and NSPS emission guidelines for existing EGUs. EPA stated that it promulgated CAMR because it found a cap and trade program to be the most cost-effective means to achieve mercury reductions from EGUs, given that the cap and trade program under EPA's Clean Air Interstate Rule (CAIR), promulgated on March 10, 2005, and the pollution controls designed to reduce emissions of sulfur dioxide (SO₂) and nitrogen oxides (NO_x) to meet the requirements of that regulation, also will result in reductions of mercury emissions as a co-benefit of controlling SO₂ and NO_x.

The cap and trade provisions of CAMR apply to existing and new EGUs having a capacity greater than 25 megawatts, the new source emission limits apply to EGUs for which construction, modification, or reconstruction occurs after January 30, 2004, and the existing source emission guidelines apply to EGUs existing on January 30, 2004. CAMR imposes a first phase nationwide cap of 38 tons per year (tpy) of mercury emissions that will become effective in the year 2010 and a second phase cap of 15 tpy that will become effective in the year 2018.

Under CAMR, owners or operators of EGUs must demonstrate compliance by holding one allowance for each ounce of mercury emitted in a given year, and allowances are transferable among all regulated facilities within the country. The emission limits for new sources all are on a rolling 12-month average basis and are:

Bituminous-fired EGUs - 21×10^{-6} pounds per Megawatt-hour (lb/MWh), which is roughly equivalent to 2.1 pounds per trillion British thermal units (lb/TBtu);

Subbituminous-fired EGUs controlled with wet flue gas desulfurization (wet FGD) - 42×10^{-6} lb/MWh, which is roughly equivalent to 4.2 lb/TBtu;

Subbituminous-fired EGUs controlled with dry FGD, 78×10^{-6} lb/MWh, which is roughly equivalent to 7.8 lb/TBtu; Lignite fired EGUs - 145×10^{-6} lb/MWh, which is roughly equivalent to 14.5 lb/TBtu;

Coal refuse-fired EGUs - 1.4×10^{-6} lb/MWh, which is roughly equivalent to 0.14 lb/TBtu; and

Integrated gasification combined cycle (IGGC) EGUs - 20×10^{-6} lb/MWh, which is roughly equivalent to 2.0 lb/TBtu.

Under CAMR, states may elect to participate in an EPA-managed cap and trade program by adopting model cap and trade rules developed by EPA or may elect not to participate in an EPA-managed cap and trade program, in which case the state's budget becomes a firm cap for the state, which would limit the state's mercury emissions to the budget listed in the EPA regulation. Also, under CAMR, each state that has a mercury budget (states like Idaho that do not have any existing EGUs do not have any allotted budget) is required to determine how it wishes to allocate mercury allowances to EGUs in the state, within the state's budget. States may follow an EPA-developed model or implement a different allocation methodology. Under CAMR, the owner or operator of any EGU that has excess emissions, after the caps become effective, will be required to surrender allowances sufficient to offset the excess emissions and will be required to surrender allowances from the next control period (next calendar year for which credits have been allocated) equal to three times the excess emissions.

Currently, litigation challenging CAMR is pending against EPA by 14 states – California, Connecticut, Delaware, Illinois, Maine, Massachusetts, Minnesota, New Hampshire, New Jersey, New Mexico, New York, Pennsylvania, Vermont, and Wisconsin – and numerous public health groups, Indian tribes, and environmental organizations.

At the request of members of the Senate Environment and Public Works Committee, based on concerns with the process used to develop EPA's January 2004 proposed alternative mercury regulations, EPA's Office of Inspector General (OIG) reviewed that proposal. OIG found the process followed by EPA, and EPA's proposed regulations, to be flawed in several major respects. See, <http://www.epa.gov/oig/reports/2005/20050203-2005-P-00003.pdf>. OIG found that EPA senior management had instructed EPA staff to develop a MACT standard that would result in a level of mercury emissions (34 tons per year) coinciding with the level expected to be achieved under CAIR, without any additional controls for mercury, instead of basing the MACT standard on an unbiased determination of the level of mercury control achieved in practice by the top performing units, which is the minimum level for a MACT standard under the FCAA.

OIG also found that the cap and trade program could be strengthened to better protect public health and ensure that anticipated emission reductions would be achieved. Among other flaws, OIG concluded that the proposed cap and trade program would not require installation of mercury-specific controls to achieve the interim 2010 cap and that the cap and trade program would not adequately address the potential for hot spots. OIG stated in its report that: "Trading programs are generally thought to be most effective for pollutants that do not deposit locally." OIG also noted that national ambient air quality standards for SO₂ and a contingency for delayed implementation due to litigation provide a backup for the acid rain trading program, whereas there are no ambient air quality standards for hazardous air pollutants such as mercury and the mercury cap and trade program included no contingency for delayed implementation. OIG also criticized EPA's failure to consult with the National Tribal Environmental Council on the proposed rulemaking, despite

the fact that two coal-fired power plants are located in Indian country and that the average tribal member eats much more fish than the typical consumer.

In 2001, the total reported mercury emissions from EGUs in Montana was 982 pounds, which represents 92% of all human-caused mercury air emissions in the state, according to EPA's Toxic Release Inventory. Montana's mercury budget under CAMR, effective in 2010, will be 0.378 tpy, or 756 pounds per year, and the Montana budget effective in 2018 will be 0.149 tpy, or 298 pounds per year. Therefore, without considering mercury emissions from EGUs in the state for which the Department of Environmental Quality ("department") has issued a permit since 2001, and without considering potential market trading, mercury emissions from EGUs in Montana would need to be reduced by at least 23% in order to comply with the 2010 state budget under CAMR. However, according to a January 6, 2006, report of the U.S. Department of Energy, titled "Coal's Resurgence in Electric Power Generation," <http://www.netl.doe.gov/coal/refshelf/ncp.pdf>, currently, seven new EGUs are proposed for Montana. Three of those (the Roundup Power Project, the Rocky Mountain Power Hardin Generation Project, and the Thompson River Co-Generation Project) already have received Montana air quality permits.

Activated Carbon Injection (ACI) control technology can be purchased and used in an EGU for mercury removal for all coal types. ACI has been used commercially to reduce mercury emissions from municipal solid waste incinerators for over twenty years. Full-scale ACI systems have been installed on over 40 U.S. coal-fired boilers in temporary ACI trials. These temporary trials have lasted between one week and 12 months. The results have demonstrated success at capturing over 90% of the mercury from EGUs firing subbituminous coals.

Brominated sorbents have proven to be extremely successful at capturing mercury from subbituminous coals, such as are commonly found in Montana. Although brominated sorbents cost more per pound than nonbrominated sorbents used for bituminous coal, less of the brominated sorbent is necessary to capture more mercury. The net operating costs are substantially lower because of this increased capture.

The owners of at least four EGUs in the western U.S. have agreed to install ACI. The owner of one EGU in Montana that will burn subbituminous western coal, the Hardin Generation Project, has agreed to install ACI in the near future.

The capital costs of installing ACI are two orders of magnitude less than the capital costs of equipment used to control SO₂ or NO_x. Recent data from field-testing sponsored by the U.S. Department of Energy's National Energy Technology Laboratory indicate that the average cost of controlling mercury will range from 0.2 to 0.8 mills per Kilowatt-hour (KWh). Based on this estimate, mercury control would add 15 to 60 cents per month to a typical 750 KWh residential electric bill.

It is necessary for the board to engage in rulemaking to restrict mercury emissions from EGUs in order for Montana to comply with its EGU mercury budget established by EPA under CAMR. Also, EGUs are, by far, the largest source of human-caused mercury emissions in the state. Although mercury emissions from EGUs in Montana account for only a small percentage of global mercury emissions and, presently, may account for a small percentage of the mercury deposited in Montana, due to the high risk posed by mercury to human health and welfare and to the environment, it is necessary to take all reasonable measures to reduce human-

caused mercury emissions. Therefore, it is necessary for the board to reduce mercury emissions from EGUs in order to protect public health and welfare and the environment.

The board is proposing to amend ARM 17.8.740 to include definitions of new terms that would be used in New Rule I.

The board is proposing to amend ARM 17.8.767 to adopt and incorporate by reference the provisions of CAMR that relate to EPA's mercury emission state budgets, emission standards, and monitoring and recordkeeping requirements codified in 40 CFR 60, subpart Da. The board is proposing to adopt and incorporate by reference the provisions of CAMR that relate to EPA's interstate mercury emission credit trading program, codified in 40 CFR 60.4101-4176 (subpart HHHH), except for 40 CFR 60.4141-4142 relating to allocation of mercury emission credits and the timing of the allocations. The board is proposing to have the adoption and incorporation of 40 CFR Part 60, subpart HHHH, and, consequently, participation in the mercury emission credit trading program, expire December 31, 2014.

Under CAMR, states are not required to adopt a mercury emissions credit trading program, but EPA has informed the department that it will not approve a mercury emissions credit trading program that restricts interstate trading by allowing only intrastate trading. The board believes that allowing trading of credits only within Montana would not greatly hinder implementation of mercury control by EGUs within the state and would not significantly add to the possibility of mercury hot spots. However, the board is concerned that allowing interstate trading beyond the time necessary for the owners and operators of EGUs within the state to reduce mercury emissions to appropriate levels could provide a disincentive to maximize mercury control and could significantly add to the possibility of mercury hot spots in the state. Because EPA has indicated that it will not approve limits on interstate trading, the board is proposing to adopt EPA's model mercury emissions credit trading program, but is proposing to terminate that program on December 31, 2014. However, as discussed further below, the board will consider comments on full participation in EPA's mercury emissions credit trading program without any sunset date or on an intrastate mercury emission credit trading program, as well as on other mercury trading and control alternatives.

New Rule I(1)(a) would limit EGU mercury emissions to 0.9 lb/TBtu on a rolling 12-month average beginning January 1, 2010, or when commercial operation begins, whichever is later, and would require operation of equipment by January 1, 2010, that is projected to meet that limit. The 0.9 lb/TBtu limit represents the level of mercury reduction necessary for the existing, permitted EGUs and EGUs for which the department expects permit applications in the near future to achieve compliance with the EPA-mandated 2018 Montana mercury budget of 298 lbs. The board believes that establishing an emission standard that will achieve the long-term goal of meeting the 2018 budget, rather than establishing phased-in emission limits, would allow for better planning by the owners and operators respecting the control configurations necessary to meet the ultimate goal. The proposed standard also would require some level of mercury control on every EGU in the state, which would result in emission reductions by each EGU by 2010, rather than potentially delaying implementation of control technology to meet only the 2018 mercury budget.

Under New Rule I(2), (3), and (4), if the owner or operator properly installs

and operates technology projected by the department to achieve the mercury emission limit, but the EGU fails to meet the limit and the owner or operator notifies the department and submits an application to the department, in conformance with the requirements of the rule, the department may establish an alternative mercury emission limit that would be effective for four years. Under New Rule I(5) and (6), upon expiration of an alternative limit, the department may establish a new alternative emission limit that is as stringent as, or more stringent than, the initial alternative limit, based on data regarding the demonstrated control capabilities of the technology operated at the EGU.

Under New Rule I(7), the department would not have authority to initiate an enforcement action for a violation of the 0.9 lb/TBtu emission limit that occurs between the date the limit becomes effective for the EGU and the date of the department's decision on an application for an alternative limit, if the owner or operator timely files a complete application for an alternative limit and has operated the EGU and control equipment in a manner consistent with good air pollution control practices for minimizing mercury emissions.

Under New Rule I(8), compliance with the mercury emission standard or any alternative mercury emission limit could be demonstrated on a facility-wide basis for an EGU that has more than one mercury emitting generating unit.

Under New Rule I(9), the owner or operator of an EGU would be required to monitor compliance with the mercury emission standard, or any applicable alternative mercury emission limit, pursuant to the monitoring requirements of CAMR found in 40 CFR 60.48(a) through 60.52(a). Under those requirements, mercury emissions would be determined by continuously collecting mercury emission data from each affected EGU by installing and operating a continuous emissions monitoring system (CEMS) or by an appropriate long-term method (e.g., sorbent trap) that can collect an uninterrupted, continuous sample of the mercury in the flue gases emitted from the EGU.

New Rule I(10) would require the owner or operator of an EGU to submit to the department quarterly reports specifying the monthly average mercury emission rate for each month of the quarter and the percentage of time the monitoring method being used was operating during the quarter.

New Rule II would specify the state's mercury allocations to meet the state's EGU mercury emission budgets established under CAMR. New Rule II(1)(a) and (b) would specify the dates by which the department would submit to EPA allocations for specific EGUs, depending upon whether commercial operation commenced before January 1, 2001, or on or after that date.

Under New Rule II(2), annual EGU mercury allowances would be calculated by multiplying the applicable emission rate times the maximum (nameplate) heat input value in million BTUs per hours and by multiplying that amount by 8,760 (for the hours in a year). The mercury allocations would be:

For the control period years beginning January 1, 2010, through the control period years ending December 31, 2014:

EGUs for which commercial operation commenced before January 1, 2001, and that do not combust lignite coal – 2.4 lb/TBtu;

EGUs for which commercial operation commenced before January 1, 2001, and that combust lignite coal – 4.7 lb/TBtu; and

EGUs for which commercial operation did not commence before January 1, 2001 – 1.5 lb/TBtu, as allocations are available, on a first-come, first-served basis, not to exceed the Montana mercury budget of 756 lbs.

Under New Rule II(2)(b), allocations would be limited to those EGUs that will be, or are anticipated to be, in commercial operation in the year for which the allocations are being made, with allocations for a partial year of operation being prorated. The owner or operator of an EGU that did not operate during a year for which allocations were made, or that operated less than projected by the department, would have to surrender excess allowances to the department. Under New Rule II(2)(c), allocations may not exceed the Montana mercury budget.

Under New Rule II(3), New Rule II would sunset on December 31, 2014, and no trading would be allowed after that date.

The board is proposing these specific limits to reduce mercury emissions and their impact to Montana. The 0.9 lb/TBtu limit reflects the emission level required by the existing and permitted EGUs, and EGUs for which the department currently is processing a permit application, to achieve compliance with the EPA-mandated Montana mercury budget of 298 lbs in 2018. Having one long-term goal, as opposed to taking a phased approach, would allow for planning by the EGUs with respect to control configurations. The temporary allocation and trading scheme, however, allows for flexibility initially between alternative emission limits, allocations that exceed the emissions limitation for existing EGUs, and interstate trading. Allocation and trading would be eliminated after December 31, 2014, and the state would rely on mercury emission controls to maintain compliance with Montana's mercury budget cap. The elimination of trading would maintain mercury control (and the consequential capital expenditures) within Montana as well as address concerns for hot spots. The proposed rule also would require some kind of control on every EGU, instead of allowing the owners and operations of some EGUs to buy credits to maintain historical mercury emissions levels. The December 31, 2014, sunset date would compel progress on emission controls while ensuring Montana's compliance with the 2018 CAMR budget cap.

While the board is proposing the specific amendments and new rules described above, the board will consider comments not only on this specific proposal but also on rule amendments and new rules that vary from these proposals and that are more or less stringent than these proposals, but that would achieve mercury reductions at least as stringent as those necessary to meet the mercury budgets established by EPA for the state. The final amendments and new rules adopted by the board will be based on the record of the proceeding, including comments on the board's specific proposal as well as comments on any different proposals that would at least meet the state's mercury budgets.

Pursuant to 75-2-207(2)(a), MCA, the board may adopt a rule to implement the Clean Air Act of Montana that is more stringent than comparable federal regulations only if the board holds a public hearing, public comment is allowed, and

the board makes a written finding after the public hearing and comment period, based on evidence in the record, that the proposed standard or requirement protects public health or the environment, can mitigate harm to public health or the environment, and is achievable with current technology. The proposed rule amendments and new rules, or any other amendments and new rules adopted by the board based on the record of this proceeding, may be more stringent than federal regulations related to control of mercury emissions from EGUs. The public hearing and comment period for this proposed rulemaking are intended to provide the public with the opportunity to comment on the issues relevant to a finding under Section 75-2-207(2)(a), MCA, as well as other issues related to the proposed rulemaking.

5. Concerned persons may submit their data, views, or arguments, either orally or in writing, at the hearings. Written data, views, or arguments may also be submitted to the board secretary at Board of Environmental Review, 1520 E. Sixth Avenue, P.O. Box 200901, Helena, Montana, 59620-0901; faxed to (406) 444-4386; or e-mailed to ber@mt.gov, no later than 5:00 p.m., July 6, 2006. To be guaranteed consideration, mailed comments must be postmarked on or before that date.

6. The Board of Environmental Review will preside over and conduct the hearing.

7. The board maintains a list of interested persons who wish to receive notices of rulemaking actions proposed by this agency. Persons who wish to have their name added to the list shall make a written request that includes the name and mailing address of the person to receive notices and specifies that the person wishes to receive notices regarding: air quality; hazardous waste/waste oil; asbestos control; water/wastewater treatment plant operator certification; solid waste; junk vehicles; infectious waste; public water supplies; public sewage systems regulation; hard rock (metal) mine reclamation; major facility siting; opencut mine reclamation; strip mine reclamation; subdivisions; renewable energy grants/loans; wastewater treatment or safe drinking water revolving grants and loans; water quality; CECRA; underground/above ground storage tanks; MEPA; or general procedural rules other than MEPA. Such written request may be mailed or delivered to the board secretary at Board of Environmental Review, 1520 E. Sixth Ave., P.O. Box 200901, Helena, Montana 59620-0901; faxed to (406) 444-4386; e-mailed to ber@mt.gov; or may be made by completing a request form at any rules hearing held by the board.

8. The bill sponsor notice requirements of 2-4-302, MCA, do not apply.

Reviewed by:

BOARD OF ENVIRONMENTAL REVIEW

/s/ David M. Rusoff

DAVID M. RUSOFF

Rule Reviewer

BY: /s/ Joseph W. Russell

JOSEPH W. RUSSELL, M.P.H.,

Chairman

Certified to the Secretary of State April 24, 2006.